

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1246047  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well  Re-Entry  Workover
- Oil  WSW  SWD  SIOW
- Gas  D&A  ENHR  SIGW
- OG  GSW  Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic  Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening  Re-perf.  Conv. to ENHR  Conv. to SWD
- Plug Back  Conv. to GSW  Conv. to Producer
- Commingled Permit #: \_\_\_\_\_
- Dual Completion Permit #: \_\_\_\_\_
- SWD Permit #: \_\_\_\_\_
- ENHR Permit #: \_\_\_\_\_
- GSW Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1246047

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR: \_\_\_\_\_ Producing Method:  Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	HERMAN L. LOEB, LLC
Well Name	YOST 3-28
Doc ID	1246047

Tops

Name	Top	Datum
Chase	2454	-231
Heebner	4053	-1830
Lansing 'A'	4218	-1995
KC 'I'	4422	-2199
BKC	4608	-2385
Cherokee Shale	4734	-2511
Miss (rework)	4780	-2557
Miss Chert	4788	-2565
Kinderhook SH	4827	-2604
Kinderhook SS	4849	-2626



# LITHOLOGY STRIP LOG

## WellSight Systems

Scale 1:240 (5"=100') Imperial

Well Name: Yost #3-28  
Location: 460' FNL & 1636' FWL, Sec. 28-T27S-R18W, Kiowa Co., KS.  
Licence Number: 15-097-21819-00-00 Region: Einsel  
Spud Date: 3/14/2015 Drilling Completed: 3/20/15  
Surface Coordinates: 460' FNL & 1636' FWL, Sec. 28-T27S-R18W

Bottom Hole Same as Above  
Coordinates:  
Ground Elevation (ft): 2210' K.B. Elevation (ft): 2223'  
Logged Interval (ft): 3900' To: 4860' Total Depth (ft): 4860'  
Formation: Kinderhook at Total Depth  
Type of Drilling Fluid: Freshwater/Gel to 3317'; Chemical Gel 3317' to 4860'

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

### OPERATOR

Company: Herman L. Loeb, LLC.  
Address: P.O. Box 838  
Lawrenceville, IL. 62439-0838

### GEOLOGIST

Name: Jon D. Christensen  
Company: Consulting Petroleum Geologist  
Address: 9002 W. Silver Hollow St.  
Wichita, KS. 67205-8856

### Cores

None Taken

### DSTs

DST #1(Conglomerate + Miss. Chert) 4759' - 4805'(Corrected Depths to Log) Test Times 15"-45"-45"-90" IFP Strong Blow, BOB/20 Sec., Gas to Surface in 5 Min., FFP Gauge Gas Throughout Max. Gauge 2.053 MMCFG(290# on a 0.5" Choke), Surface Blowback on FSI; REC: 6" GOCM in top of test tool, no water; IFP 494-515#, ISIP 1336#, FFP 476-470#, FSIP 1299#, IHP 2544#, FHP 2434#, BHT 120 Deg. F.

DST #2(Miss. Chert) 4805' - 4820'(Corrected Depths to Log) Test Times 15"-45"-45"-90" IFP Fair Blow built to 10", FFP Strong Blow BOB/20 Sec., no Gas to Surface, no Blowback on SI's; REC: 90' Gas in Pipe, 30' MCO(60%O, 40%M), no water; IFP 21-26#, ISIP 1316#, FFP 15-36#, FSIP 1350#, IHP 2497#, FHP 2433#, BHT 120 Deg. F.

## Comments

3/13/15 MIRU Sterling Drilling Co. Rig #5; 3/14/15 Spud at 6:00 AM., Drilling at 42'; 3/15/15 Drilling at 640'; 3/16/15 Drilling at 2920'; 3/17/15 Drilling at 4210'; 3/18/15 Drilling at 4618'; 3/19/15 TD. 4809' - DST #1; 3/20/15 RTD. 4860' - Reached TD. at 6:22 AM., CFS/CCH for Logs; 3/21/15 RTD. 4860' - Production Casing Set.

Set new 8 5/8"(24#) Surface Casing at 549' KB. with 400 sacks cement(Basic Energy Services). Cement did Circulate. PD. at 6:00 PM. on 3/14/15.

Set new 5 1/2"(15.5#) Production Casing at 4859' with 200 sacks of "Loeb Blend" cement(Basic Energy Services). PD. at 5:15 AM. on 3/21/15.

Surveys: 0.50 Deg. at 554'(Surface Casing); 0.75 Deg. at 4210'(Bit Trip); 0.50 Deg. at 4809'(DST #1).







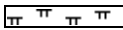



Pipe Strap at 4809'(DST #1): Strap 0.12' Long to the Board, no correction made to the Board.

After review of the Halliburton Logs, DST data and positive indications of commercially recoverable hydrocarbons, the operator elected to set new 5 1/2" Production Casing for completion in the Mississippian.








































































LOG TOPS: Chase 2454(-231), Stotler Lmst. 3408(-1185), Howard 3614(-1391), Heebner Shale 4053(-1830), Toronto 4070(-1847), Brown Lmst. 4208(-1985), Lansing 'A' 4218(-1995), Kansas City 'I' 4422(-2199), Stark Shale 4510(-2287), Hertha 4570(-2347), Base Kansas City 4608(-2385), Marmaton 4647(-2424), Cherokee Shale 4734(-2511), Reworked Miss/Conglomerate 4780(-2557), Miss. Chert 4788(-2565), Kinderhook Shale 4827(-2604), Kinderhook Sand 4849(-2626).

NOTE: This log was shifted upward by 2' to 4' for correlation purposes with the Halliburton Logs.

### ROCK TYPES

 Anhy  Bent  Brec  Cht	 Clyst  Coal  Congl  Dol	 Gyp  Igne  Lmst  Meta	 Mrlst  Salt  Shale  Shcol	 Shgy  Sltst  Ss  Till
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### ACCESSORIES

<b>MINERAL</b>  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb  Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau	 Gyp  Hvymin  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt  Sandy  Silt  Sil  Sulphur  Tuff	<b>FOSSIL</b>  Algae  Amph  Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Gastro  Oolite	 Ostra  Pelec  Pellet  Pisolite  Plant  Strom  <b>STRINGER</b>  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst	 Sltstrg  Ssstrg  <b>TEXTURE</b>  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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**OTHER SYMBOLS**

- POROSITY**  
 [E] Earthy  
 [F] Fenest  
 [X] Fracture  
 [M] Inter  
 [O] Moldic  
 [P] Organic  
 [P] Pinpoint

[V] Vuggy

- SORTING**  
 [W] Well  
 [M] Moderate  
 [P] Poor

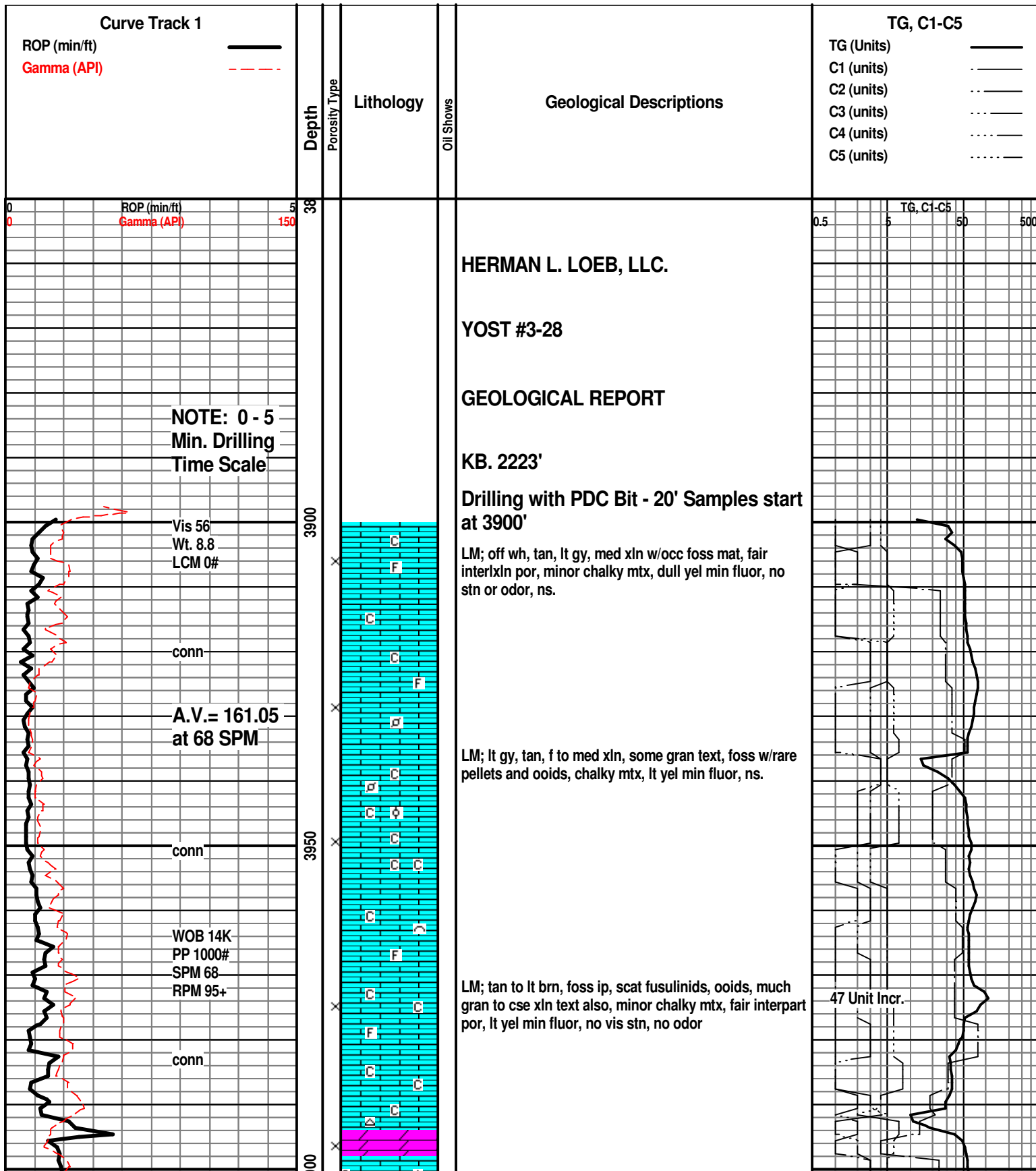
- ROUNDING**  
 [R] Rounded  
 [r] Subrnd  
 [a] Subang  
 [A] Angular

**OIL SHOW**  
 [●] Even

- [●] Spotted  
 [○] Ques  
 [D] Dead

- INTERVAL**  
 [■] Core  
 [□] Dst

- EVENT**  
 [▽] Rft  
 [▲] Sidewall



NOTE: 0 - 5 Min. Drilling Time Scale

Vis 56  
Wt. 8.8  
LCM 0#

conn

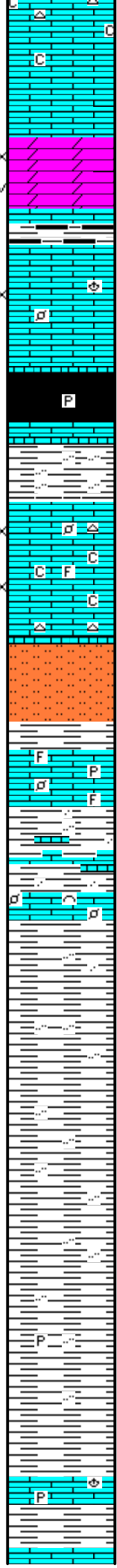
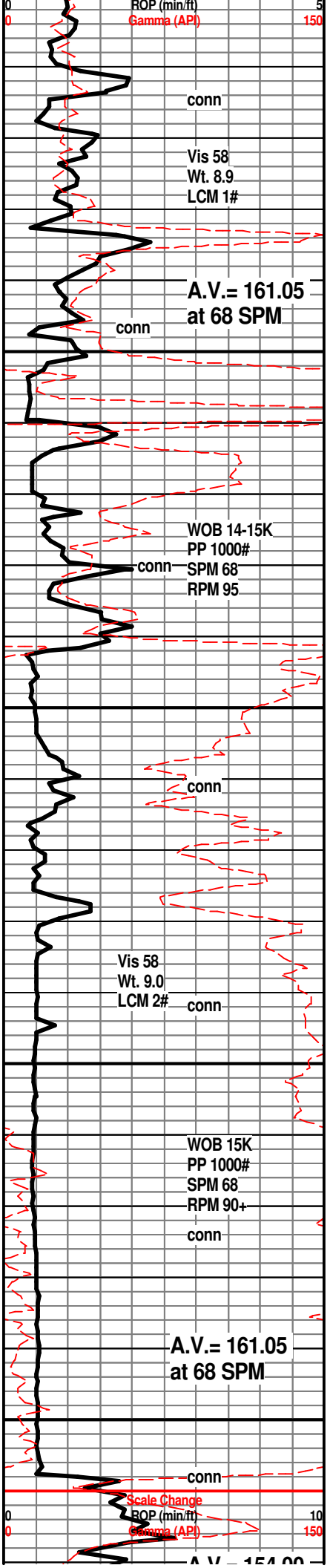
A.V.= 161.05  
at 68 SPM

conn

WOB 14K  
PP 1000#  
SPM 68  
RPM 95+

conn

47 Unit Incr.



LM; tan to off wh, f to med xln, scat gy to lt brn cht, fair interxln por, chalky mtx, lt yel fluor, no stn or odor, ns.

DOL; tan to lt brn, sucrosic, fair interxln w/trc vug por, lt to med yel min fluor, no stn or odor, ns.

SH; med to dk gy, rare blk, platy

LM; tan to cream, lt brn, fxln, scat foss mat, poor interxln/interpart por, dull yel fluor, no stn or odor, ns.

**HEEBNER SHALE 4053(-1830)**  
SH; blk, carb ip, gassy, rare pyr

SH; grn, gy grn, silty, soft

**TORONTO 4070(-1847)**  
LM; off wh, cream, buff, fxln w/occ foss mat, rare off wh to wh cht, poor to fair interpart por, minor chalky mtx, lt yel to no fluor, no stn or odor, ns.

**DOUGLAS SHALE 4091(-1868)**  
SLTST; lt gy, mica, sandy w/interbdd vf gr qtz ss, soft

LM; tan to lt brn, foss ip, most dense, blocky, rare pyr, tite

SH; lt gy, sandy to silty, firm, occ mica, interbdd argil lmst strngs

LM; med brn, hd, foss ip, tite

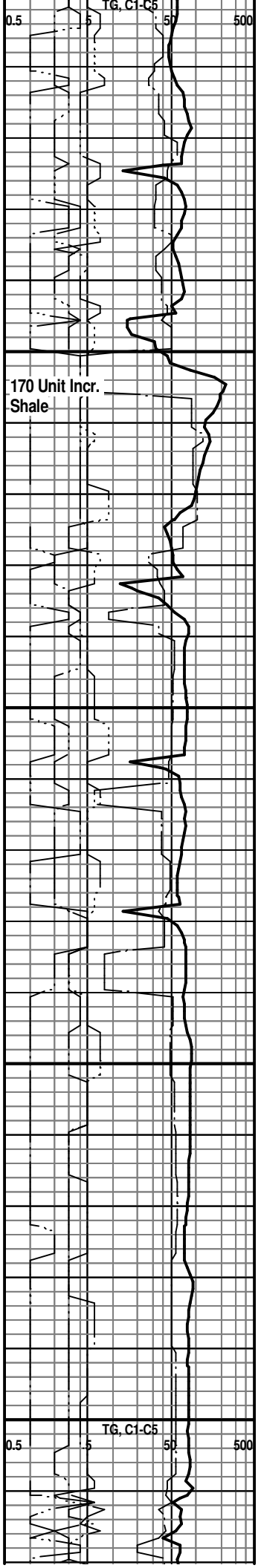
SH; lt gy, silty ip, platy

SH; lt to med gy, platy, silty, firm

SH; lt to med gy, silty ip, smooth, occ pyr

**BIT TRIP at 4210' - resume drilling with Button Bit**  
**BROWN LMST. 4208(-1985)**  
LM; med brn, hd, foss ip, pyr, tite

**LANSING 'A' 4218(-1995)**





A.V.= 154.00  
at 58 SPM

MudCo. Mud  
Check at 4228'  
Vis 70 Wt. 9.1+  
WL 10.0 Cl 6000  
PH 9.0 LCM 1#

WOB 42K  
PP 990#  
SPM 56  
RPM 71

Vis 65  
Wt. 9.2  
LCM 1#  
conn

A.V.= 153.00  
at 56 SPM

WOB 42K  
PP 975#  
SPM 56  
RPM 68

CFS. at 4432'

Vis 54

conn

conn

conn

conn

conn

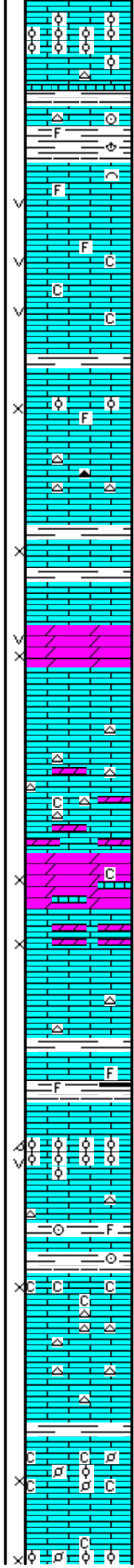
conn

4250

4300

4350

4400



LM; lt brn, tan, oolitic, most med to occ lrg molds, gd oomoldic por, scat vug por, rare chalky mtx, dull to lt yel fluor, no vis stn, no odor

SH; med gy, platy, foss ip.

### LANSING 'B' 4243(-2020)

LM; off wh, buff, foss ip, most dense - well cem, scat small vug por, v. dull yel min fluor, no vis stn, no odor, no gas kick

LM; off wh, lt gy, med to occ cse xln, rare foss mat, minor chalky mtx, fair vug por, dull yel min fluor only, no stn, no gas kick, ns.

LM; lt brn, fxln, gd interxln por, soft, some foss mat w/rare oolites, dull yel fluor, no stn or odor, ns.

LM; lt to med brn, hd, scat med to dk gy & tan cht, no vis por, ns.

LM; med gy brn, hd, some fxln w/scat fair interxln por, most dense, dull yel fluor, ns.

DOL; tan to lt gy, sucrosic to med rhombic, scat gd vug w/interxln por, lt yel min fluor, no stn or odor, no gas kick, ns.

LM; tan to lt brn, most dense, micritic, scat gy to lt brn cht, tite

LM; off wh, tan, fxln to sucrosic text, interbdd dolomite and dolo. lmst, some soft chalky mtx, fair interxln por, no fluor, ns.

LM; off wh, tan, med to cse xln, partly dolomitic, abnt wh and gy fresh cht, fair interxln por, dull yel min fluor, no stn or odor, no gas kick

SH; med to dk gy, trc blk, foss ip.

### LANSING/K.C. 'H' 4375(-2152)

LM; lt brn, oolitic, most w/med size molds, gd oomoldic por, rare vugs, brittle ip, dull yel to no fluor, no stn or odor, ns.

SH; med gy, gy grn, platy, foss ip.

LM; tan to buff, off wh, fxln, soft chalky mtx ip, fair interxln por, no fluor, no stn, ns.

LM; tan to lt brn, fxln, most dense - micritic, scat gy to tan cht, no vis por, no fluor, ns.

### K.C. 'I' ZONE 4422(-2199)

LM; tan to buff, finely pelletal, few small ooids, much soft chalky mtx, poor to fair interpart por, v. dull yel min fluor, no odor, trc dk dead oil stn, poor - no show

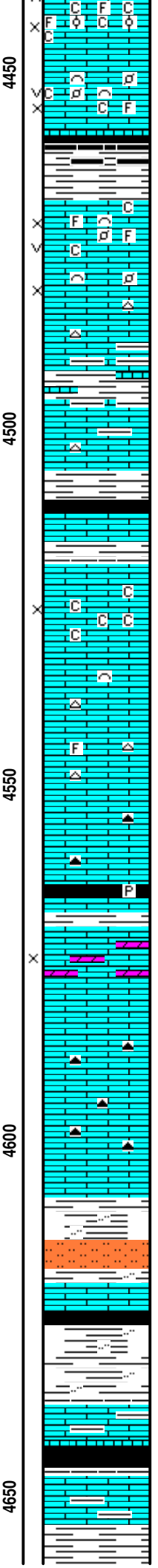
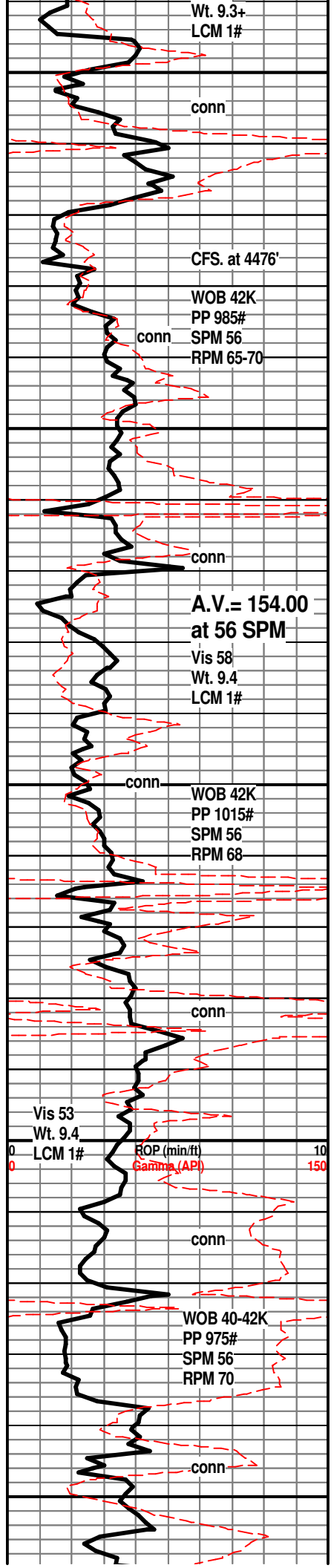
LM; lt gy, lt brn, tan, foss w/some oolitic lmst, scat

5 Unit Incr.

6 Unit Incr.

4 Unit Incr.

T.G. Cl. 50 500



pellets, fair interpart por, partly chalky, no fluor, no stn or odor, no gas kick

LM; tan to buff, foss ip, fair vug and interpart por, poss gas bubbles, minor chalky mtx, no vis oil stn, poss. faint odor, no fluor or cut

SH; med to dk gy, some blk, platy

**K.C. 'J' ZONE 4468(-2245)**  
LM; tan to cream, foss to med xln, gd interxln w/occ vug por, minor chalky mtx, quest. odor, no fluor, no vis oil stn, no sample shows

LM; tan to lt gy brn, foss ip, scat med xln lmst w/fair interxln por, no fluor, no stn or odor, occ gy cht, ns.

SH; med gy, lmy, firm

LM; med gy brn, med gy, argil ip, hd, no vis por, blocky, ns.

**STARK SHALE 4510(-2287)**  
SH; blk, carb ip, faint gas odor

**SWOPE 4519(-2296)**  
LM; wh, off wh, tan, fxln, fair interxln por, much soft chalk and chalky mtx, dull yel min fluor, no stn or odor, ns.

LM; tan to lt gy, lt brn, foss ip, well cem, some dense micritic lmst, rare off wh foss cht, no vis por, no fluor, ns.

LM; lt to med brn, blocky, dense, scat smoky cht

SH; blk, carb ip, occ pyr

**HERTHA 4570(-2347)**  
LM; tan to cream, buff, fxln w/trc sucrosic text, partly dolomitic, med yel min fluor, occ spar calc xtals, poor interxln por, no stn or odor, ns.

LM; med to dk brn, dense, litho, scat dk brn to occ smoky cht, no vis por, ns.

**BASE KANSAS CITY 4608(-2385)**  
SH; med gy, grn, gy grn, rust red, interbdd grn sltst, platy

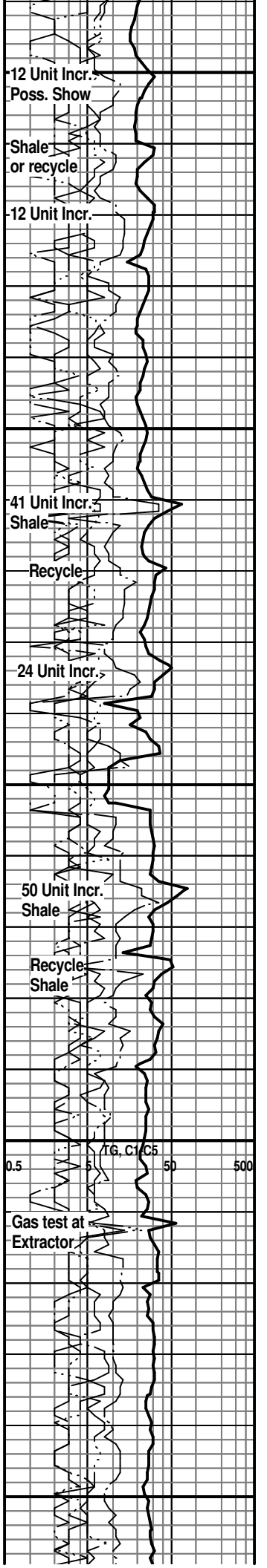
LM; med gy, hd, micritic, tite

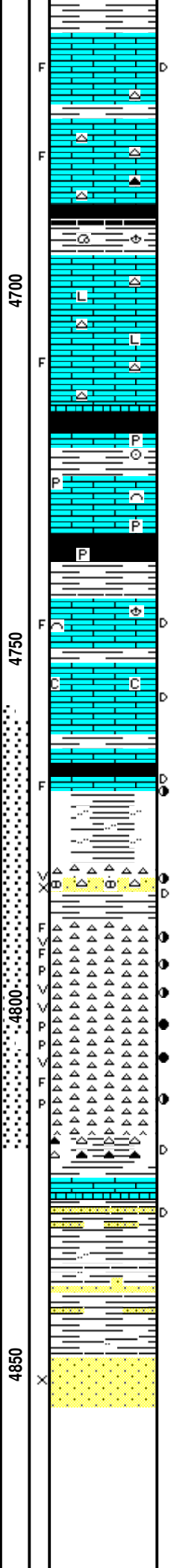
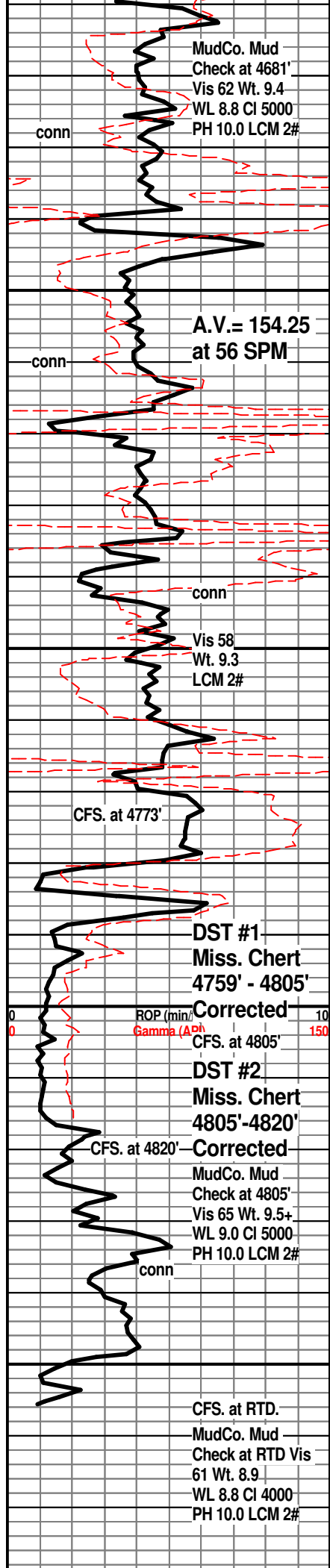
SH; med gy, gy grn, trc blk, platy, occ silty

**PLEASANTON 4636(-2413)**  
LM; lt gy, lt brn, occ pale grn tint, argil ip, hd

**MARMATON 4647(-2428)**  
LM; tan to lt brn, rare pale grn tint, blocky, argil ip, tite

SH; med av. grn. platy. smooth





SH; tan to lt brn, most dense, scat pcs. w/blk tar/gils, few frags w/blk tar, no live shows, lt yel min fluor in some, no odor

LM; lt to med brn, most dense - micritic, scat calc xtals on frac faces, interbdd gy to brn cht, rare lt yel fluor, no stn or odor, ns.

SH; dk gy, some blk, platy, foss ip.

**PAWNEE 4695(-2472)**  
LM; tan to lt brn, hd, litho, rare gy cht, no vis por, no fluor, ns.

LM; med brn, hd, few calc fld frags, most dense, no fluor, no stn or odor, ns.

SH; blk, carb, gassy

LM; med brn, foss ip, hd, occ pyr, no vis por, no fluor, ns.

**CHEROKEE SHALE 4734(-2511)**  
SH; blk, dk gy, carb ip, platy, occ pyr

LM; tan to lt brn, foss ip, most dense, few pcs w/blk tar/gils, all dead oil, poss frags, dull yel fluor, no odor, no live shows

LM; lt brn, fxl, minor chalky mtx, sev. pcs w/blk tar/gils, most dense, blocky, v. dull yel min fluor, no live shows, some dense lm. w/grn & brn incl.

SH; dk gy to blk, platy

**CHEROKEE LMST. 4768(-2545)**  
LM; lt/med brn, trc blk tar/gils, trc frags w/live oil stn, dull yel fluor, poss. faint odor

**REW. MISS/CONGLOM. 4780(-2557)**  
CHT and SS; wh, clr, org, yel, nodular, cse gr qtz ss clusters, frags and vug por in cht, some live oil stn w/much blk gils/tar, fair odor, SFO

**MISSISSIPPI CHERT 4788(-2565)**  
CHT; wh, fresh and trip, vug por w/SFO(Gassy) in tripolite, some frags, much uniform med to occ brite yel fluor, fair to gd odor, spotted to occ even lt brn oil stn, gd cut

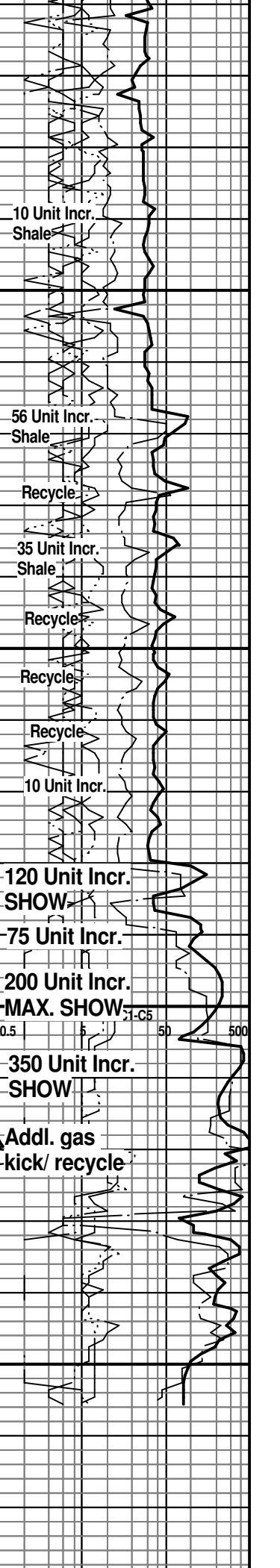
**DST #1: Miss. Chert 4759' - 4805'**  
CHT; wh, off wh, pale yel org, most fresh, frags w/live oil stn, faint odor, scat fair p-p and vug por, lesser amount of fluor than above, SSFO, few gas bubbles

**DST #2: Miss. Chert 4805' - 4820'**  
Corrected Depth to Log

**KINDERHOOK SHALE 4827(-2604)**  
SH; med gy, interbdd strngs of vf gr ss w/blk tar/gils, hd, no vis por

SH; med gy, gy grn, silty to sandy, interbdd thin vf gr grn ss strngs, pyr ip.

**KINDERHOOK SAND 4849(-2626)**  
SS; lt gy, pale grn, wh, f gr qtz, clusters, well srt, fri, gd intergran por, no stn or odor, barren



RTD. 4860' at 6:22 AM. on 3/20/15





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Herman L Loeb LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

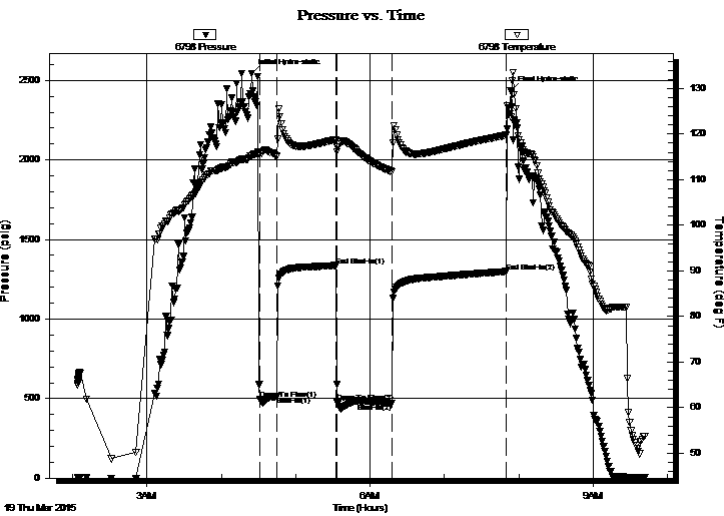
**28-27S-18W Kiowa**  
**Yost 3-28**  
 Job Ticket: 59754 **DST#: 1**  
 Test Start: 2015.03.19 @ 02:04:11

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 04:31:26 Tester: Leal Cason  
 Time Test Ended: 09:42:11 Unit No: 74  
 Interval: **4763.00 ft (KB) To 4809.00 ft (KB) (TVD)** Reference Elevations: 2223.00 ft (KB)  
 Total Depth: 4809.00 ft (KB) (TVD) 2210.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 13.00 ft

**Serial #: 6798 Inside**  
 Press@RunDepth: 469.99 psig @ 4764.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.03.19 End Date: 2015.03.19 Last Calib.: 2015.03.19  
 Start Time: 02:04:12 End Time: 09:42:11 Time On Btm: 2015.03.19 @ 04:24:26  
 Time Off Btm: 2015.03.19 @ 07:53:26

**TEST COMMENT:** IF: Strong Blow , BOB in 20 seconds, GTS in 5 minutes, Gauged & Caught Sample  
 IS: Weak Surface Blow Back  
 FF: Strong Blow , BOB & GTS Immediate, Gauged & Caught Sample  
 FS: Weak Surface Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2543.57	115.25	Initial Hydro-static
7	493.74	115.71	Open To Flow (1)
21	514.98	115.00	Shut-In(1)
69	1336.45	118.81	End Shut-In(1)
69	476.23	117.13	Open To Flow (2)
114	469.99	111.76	Shut-In(2)
206	1298.71	119.76	End Shut-In(2)
209	2433.60	123.75	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	4686 GIP	0.00
0.50	Approximately 6 inches GOCM in Head	0.00

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	250.00	1783.56
Last Gas Rate	0.50	280.00	1985.93
Max. Gas Rate	0.50	290.00	2053.39



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Herman L Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jon Christensen

**28-27S-18W Kiowa**  
**Yost 3-28**  
Job Ticket: 59754      **DST#: 1**  
Test Start: 2015.03.19 @ 02:04:11

### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.02 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4686 GIP	0.000
0.50	Approximately 6 inches GOCM in Head	0.002

Total Length: 0.50 ft      Total Volume: 0.002 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**GAS RATES**

Herman L Loeb LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jon Christensen

**28-27S-18W Kiowa**  
**Yost 3-28**  
Job Ticket: 59754      **DST#: 1**  
Test Start: 2015.03.19 @ 02:04:11

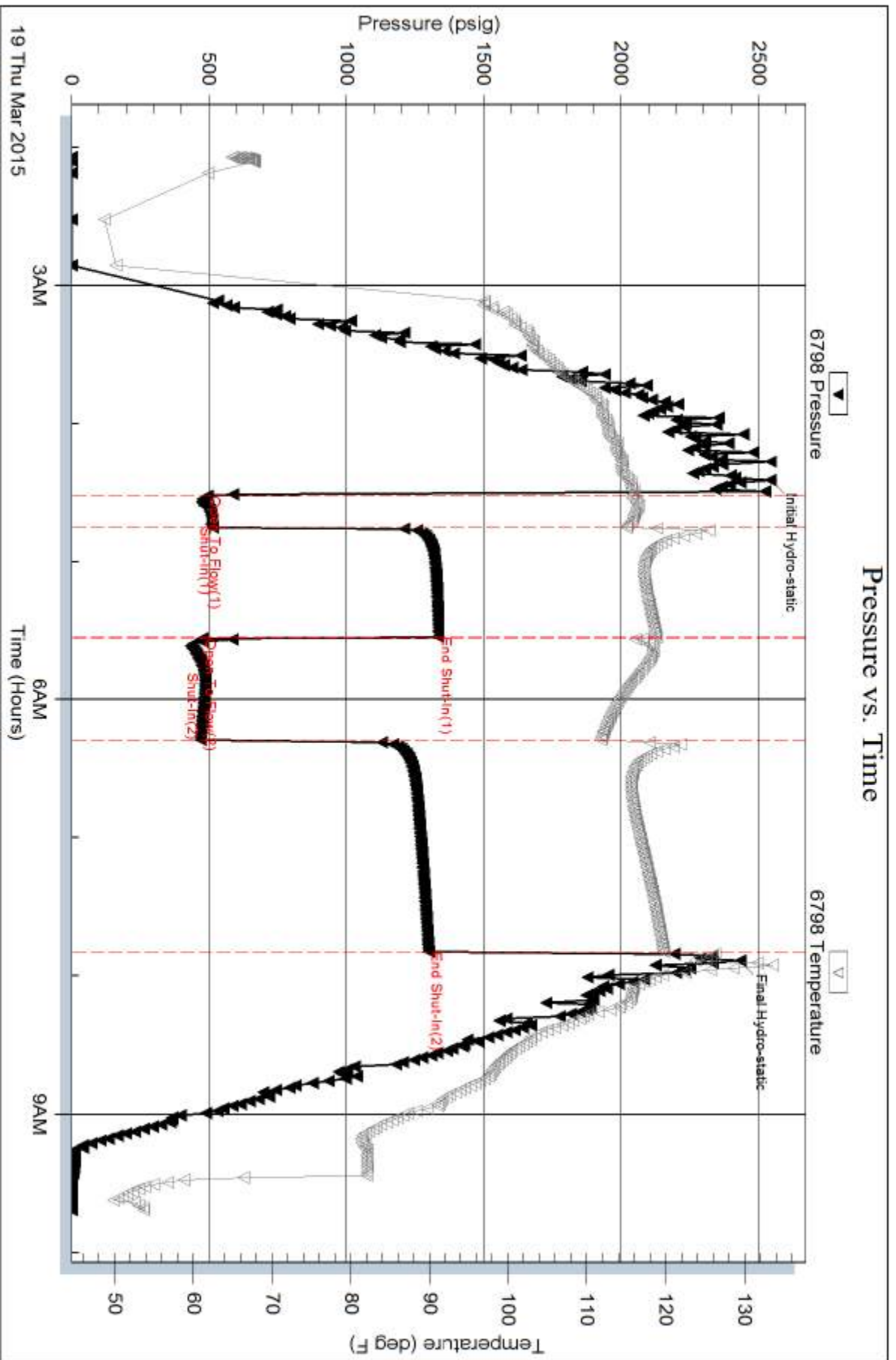
### Gas Rates Information

Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	10	0.50	250.00	1783.56
1	15	0.50	250.00	1783.56
2	10	0.50	250.00	1783.56
2	20	0.50	290.00	2053.39
2	30	0.50	290.00	2053.39
2	40	0.50	280.00	1985.93
2	45	0.50	280.00	1985.93

### Pressure vs. Time







**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Herman L Loeb LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

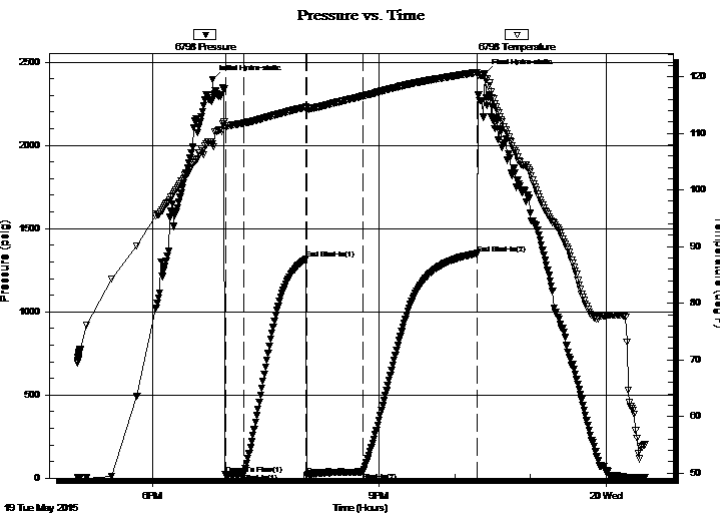
**28-27S-18W Kiowa**  
**Yost 3-28**  
 Job Ticket: 59755 **DST#: 2**  
 Test Start: 2015.03.20 @ 17:00:34

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 18:57:49  
 Time Test Ended: 00:30:49  
 Interval: **4809.00 ft (KB) To 4824.00 ft (KB) (TVD)**  
 Total Depth: 4824.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Leal Cason  
 Unit No: 74  
 Reference Elevations: 2223.00 ft (KB)  
 2210.00 ft (CF)  
 KB to GR/CF: 13.00 ft

**Serial #: 6798** **Inside**  
 Press@RunDepth: 36.36 psig @ 4810.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2015.05.19 End Date: 2015.05.20 Last Calib.: 2015.05.20  
 Start Time: 17:00:35 End Time: 00:30:49 Time On Btm: 2015.05.19 @ 18:47:49  
 Time Off Btm: 2015.05.19 @ 22:23:49

**TEST COMMENT:** IF: Fair Blow , Built to 10 inches  
 IS: No Blow Back  
 FF: Strong Blow , BOB in 20 seconds  
 FS: No Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2396.57	108.20	Initial Hydro-static
10	20.75	111.35	Open To Flow (1)
25	25.84	111.79	Shut-In(1)
75	1316.52	114.67	End Shut-In(1)
75	15.39	114.33	Open To Flow (2)
120	36.36	116.58	Shut-In(2)
210	1350.11	120.78	End Shut-In(2)
216	2432.95	119.64	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	90 GIP	0.00
30.00	MCO 40%M 60%O	0.15

\* Recovery from multiple tests

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Herman L Loeb LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

**28-27S-18W Kiowa**  
**Yost 3-28**  
 Job Ticket: 59755      **DST#: 2**  
 Test Start: 2015.03.20 @ 17:00:34

### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.02 inches			

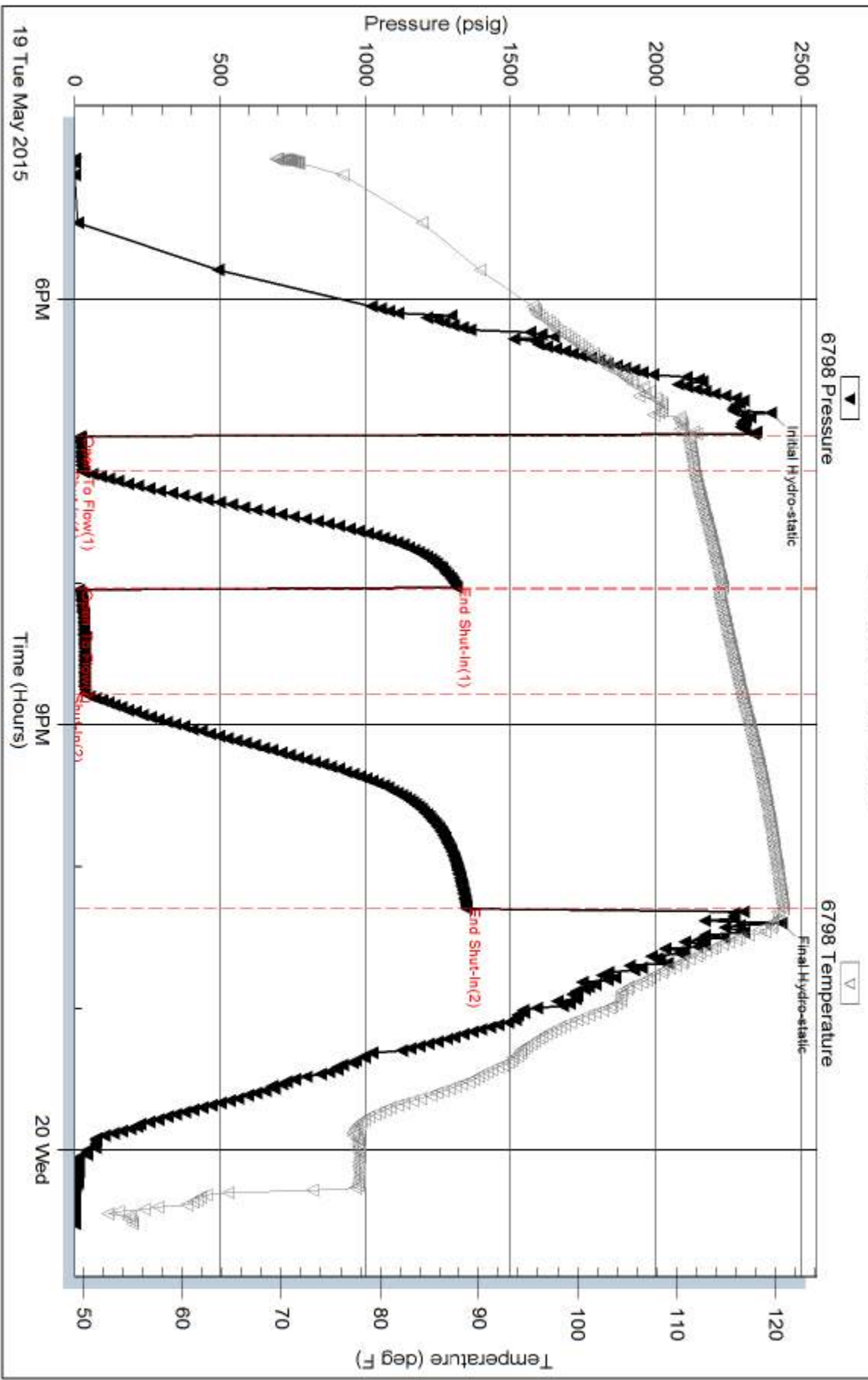
### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	90 GIP	0.000
30.00	MCO 40%M 60%O	0.148

Total Length: 30.00 ft      Total Volume: 0.148 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

### Pressure vs. Time





1076  
Til Yostl  
6438

PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	100758	1718	03/17/2015
<b>INVOICE NUMBER</b>			
<b>91756458</b>			

Pratt (620) 672-1201

B HERMAN L LOEB LLC  
I PO Box: 838  
L LAWRENCEVILLE  
L IL US 62439  
T  
O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Yost 3-28  
O LOCATION  
B COUNTY KIowa  
S STATE KS  
I JOB DESCRIPTION Cement-New Well Casing/Pi  
T  
E JOB CONTACT

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40824086	20920		Net - 30 days	04/16/2015

For Service Dates: 03/14/2015 to 03/14/2015

0040824086

171811514A Cement-New Well Casing/Pi 03/14/2015  
Cement 8 5/8 Surface

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
A-Con Blend Common	200.00	EA	10.80	2,160.00 T
Common Cement	200.00	EA	9.60	1,920.00 T
Celloflake	100.00	EA	2.22	222.00 T
Calcium Chloride	940.00	EA	0.63	592.20 T
Sugar	50.00	EA	3.00	150.00 T
"Top Rubber Cmt Plug, 8 5/8""	1.00	EA	135.00	135.00
"8 5/8"" Guide Shoe (Red)"	1.00	EA	330.00	330.00
"Baffle Plate Alum., 8 5/8"" (Blue)"	1.00	EA	102.00	102.00
"8 5/8"" Basket (Blue)"	1.00	EA	189.00	189.00
"Unit Mileage Chg (PU, cars one way)"	35.00	MI	2.70	94.50
Heavy Equipment Mileage	70.00	MI	4.50	315.00
"Proppant & Bulk Del. Chgs., per ton mil	658.00	EA	1.50	987.00
Depth Charge; 501'-1000'	1.00	EA	720.00	720.00
Blending & Mixing Service Charge	400.00	BAG	0.84	336.00
Plug Container Util. Chg.	1.00	EA	150.00	150.00
"Service Supervisor, first 8 hrs on loc.	1.00	EA	105.00	105.00

PAID  
57526  
MAR 23 2015

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:		
BASIC ENERGY SERVICES, LP PO BOX 841903 DALLAS, TX 75284-1903	BASIC ENERGY SERVICES, LP 801 CHERRY ST, STE 2100 FORT WORTH, TX 76102	SUB TOTAL	8,507.70
		TAX	360.66
		INVOICE TOTAL	8,868.36



**BASIC**<sup>SM</sup>  
ENERGY SERVICES  
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61  
P.O. Box 8613  
Pratt, Kansas 67124  
Phone 620-672-1201

FIELD SERVICE TICKET  
1718 11514 A

DATE \_\_\_\_\_ TICKET NO. \_\_\_\_\_

DATE OF JOB: 03-14-15		DISTRICT: PRATT 105		NEW WELL <input checked="" type="checkbox"/>		OLD WELL <input type="checkbox"/>		PROD <input type="checkbox"/>		INJ <input type="checkbox"/>		WDW <input type="checkbox"/>		CUSTOMER ORDER NO.:	
CUSTOMER: Hermann Luch				LEASE: YOST				DATE: 3-28				WELL NO.:			
ADDRESS:				COUNTY: KIOWA				STATE: KS							
CITY:				STATE:				SERVICE CREW: Sullivan, Egan, Bondy							
AUTHORIZED BY:				JOB TYPE: CNW 848 Surface											
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME					
20920	45						3-14-15			8:30					
19918	25									2:30					
										5:15					
										6:00					
										6:30					
						MILES FROM STATION TO WELL				35					

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: Alan Lofth  
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
CP 100-C	A-COW 8 1/2" cut	sk	200		3,600.00
CP 100-C	Common cut	sk	200		3,200.00
CP 102	Cellulose	lb	100		370.00
CP 109	Calcium chloride	lb	940		987.00
CF 105	Top Ribbon Hay 876	SA	1		225.00
CF 203	Guard Shoe Slip Type	SA	1		550.00
A 753	Baffle Plate	SA	1		170.00
CF 1903	Basket	SA	1		315.00
CP 131	Supply	SA	1		250.00
E 102	Rife	mi	35		157.50
E 101	Head Spout	mi	20		525.00
E 113	Bulk Valve	TON	655		1,645.00
CF 201	Anti Slung 500-200	SA	1		1,200.00
CF 240	Hydro - Heavy	sk	470		560.00
CF 504	Hay Contained Pail	SA	1		250.00
S 003	Schumer - Liferan	SA	1		175.00
SUB TOTAL					14,179.50

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
TOTAL		8,507.70

SERVICE REPRESENTATIVE: <u>Robert Miller</u>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <u>Alan Lofth</u> (WELL OWNER OPERATOR CONTRACTOR OR AGENT)
FIELD SERVICE ORDER NO.:	

Customer <i>HORMAN Loop</i>		Lease No.		Date <i>03-14-17</i>	
Lease <i>405T</i>		Well # <i>3-28</i>			
Field Order # <i>11-14</i>	Station <i>Pratt KS</i>	Casing <i>8 5/8</i>	Depth <i>549</i>	County <i>Kingman</i>	State <i>KS</i>
Type Job <i>CAW 8 5/8 surface</i>			Formation	Legal Description <i>28-27-18</i>	

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size <i>8 5/8</i>	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
Depth <i>549</i>	Depth	From	To	Pre Pad	Max		5 Min.
Volume <i>32</i>	Volume	From	To	Pad	Min		10 Min.
Max Press <i>400</i>	Max Press	From	To	Frac	Avg		15 Min.
Well Connection <i>1 1/2</i>	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth <i>404</i>	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative	Station Manager <i>DAVE SCOTT</i>	Treater <i>Robert Fuller</i>
-------------------------	--------------------------------------	---------------------------------

Service Units	<i>37900</i>	<i>33708</i>	<i>20920</i>	<i>19326</i>	<i>19918</i>				
Driver Names	<i>Sullivan</i>	<i>ESLEY</i>		<i>Bowden</i>					

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>2:30 pm</i>					<i>on line</i>
					<i>Run 8 5/8 surface eq.</i>
<i>4:55</i>					<i>Casing on Bottom</i>
<i>5:05</i>					<i>Hook up circ eq.</i>
<i>5:15</i>			<i>3</i>	<i>3.5</i>	<i>1st spacer</i>
			<i>88</i>	<i>4.5</i>	<i>1st mix amt 200 sk A-CW @ 12 pp. 5%</i>
			<i>42</i>		<i>1st mix comm and gust 2% @ 1/4 of amt mixed shot down</i>
					<i>Release Plug</i>
				<i>3.5</i>	<i>1st Disp plug down</i>
<i>6:00</i>	<i>450</i>		<i>32</i>		<i>circ 12 BBL out pit</i>
					<i>JOB Complete</i>
					<i>THANK YOU</i>

6076 7114ost1 6438



PAGE	CUST NO	YARD #	INVOICE DATE
1 of 1	1007589	1718	03/27/2015
<b>INVOICE NUMBER</b>			
<b>91767636</b>			

Pratt (620) 672-1201  
 B HERMAN L LOEB LLC  
 I PO Box: 838  
 L LAWRENCEVILLE  
 L IL US 62439  
 T  
 O ATTN: ACCOUNTS PAYABLE

J LEASE NAME Yost 3-28  
 O LOCATION  
 B COUNTY Kiowa  
 S STATE KS  
 I JOB DESCRIPTION Cement-New Well Casing/Pi  
 T JOB CONTACT  
 E

JOB #	EQUIPMENT #	PURCHASE ORDER NO.	TERMS	DUE DATE
40827441	20920		Net - 30 days	04/26/2015

	QTY	U of M	UNIT PRICE	INVOICE AMOUNT
<i>For Service Dates: 03/21/2015 to 03/21/2015</i>				
0040827441				
171811521A Cement-New Well Casing/Pi 03/21/2015				
Cement 5 1/2" Longstring				
50/50 POZ	250.00	EA	6.60	1,649.90 T
Celloflake	63.00	EA	2.22	139.85 T
Gypsum	1,050.00	EA	0.45	472.46 T
FLA-322	105.00	EA	4.50	472.46 T
Gilsonite	1,500.00	EA	0.40	602.95 T
KCL, Potassium Chloride	566.00	EA	0.90	509.36 T
Claymax KCL Substitute	5.00	EA	21.00	104.99 T
Mud Flush	1,000.00	EA	0.90	899.93 T
"Latch Down Plug & Baffle, 5 1/2" (Blue)	1.00	EA	239.98	239.98
"Auto Fill Float Shoe 5 1/2" (Blue)"	1.00	EA	215.98	215.98
"Turbolizer, 5 1/2" (Blue)"	12.00	EA	66.00	791.94
"5 1/2" Basket (Blue)"	2.00	EA	173.99	347.97
Cement Scratchers Rotating Type	8.00	EA	45.00	359.97
"Unit Mileage Chg (PU, carc one way)"	35.00	MI	2.70	94.49
Heavy Equipment Mileage	70.00	MI	4.50	314.98
"Proppant & Bulk Del. Chgs., per ton mil	368.00	EA	1.50	551.96
Depth Charge; 4001'-5000'	1.00	EA	1,511.88	1,511.88
Blending & Mixing Service Charge	250.00	BAG	0.84	209.98
Plug Container Util. Chg.	1.00	EA	149.99	149.99
"Service Supervisor, first 8 hrs on loc.	1.00	EA	104.99	104.99

PAID  
 57904  
 APR 09 2015  
 SCANNED

PLEASE REMIT TO:	SEND OTHER CORRESPONDENCE TO:	SUB TOTAL	9,746.01
BASIC ENERGY SERVICES, LP	BASIC ENERGY SERVICES, LP	TAX	346.91
PO BOX 841903	801 CHERRY ST, STE 2100	INVOICE TOTAL	10,092.92
DALLAS, TX 75284-1903	FORT WORTH, TX 76102		







Customer <i>MORRISON 606</i>	Lease No.	Date <i>03-21-15</i>	
Lease <i>YUST</i>	Well # <i>7-28</i>		
Field Order # <i>11521</i>	Station <i>PRATT KS</i>	Casing <i>5 1/2</i>	Depth <i>4842</i>
Type Job <i>CNW 5 1/2 Long Stay</i>	Formation	County <i>KIOWA</i>	State <i>KS</i>
		Legal Description <i>25-27-18</i>	

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
<i>5 1/2</i>				Pre Pad	Max		5 Min.	
Depth <i>4842</i>	Depth	From	To	Pad	Min		10 Min.	
Volume <i>115 1/2</i>	Volume	From	To	Frac	Avg		15 Min.	
Max Press <i>2000</i>	Max Press	From	To		HHP Used		Annulus Pressure	
Well Connection <i>P.L.</i>	Annulus Vol.	From	To	Flush	Gas Volume		Total Load	
Plug Depth <i>4832</i>	Packer Depth	From	To					

Customer Representative	Station Manager <i>DAVE SCOTT</i>	Treater <i>Robert Sullivan</i>
Service Units <i>37900 33708 20920 19900 19862</i>		
Driver Names <i>Sullivan Egan CRAIG</i>		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>10:50</i>					<i>on loc</i>
					<i>Run 5 1/2 csg</i>
<i>3:20</i>					<i>CASING on BOTTOM</i>
<i>3:25</i>					<i>HOOK UP CIRC</i>
<i>4:30</i>			<i>5</i>	<i>3.5</i>	<i>AT SPACER</i>
			<i>24</i>		<i>ST AND FLUSH</i>
	<i>400</i>		<i>5</i>		<i>SPACER</i>
			<i>45</i>	<i>4.5</i>	<i>mix cont 200sk 5/8 super @ 14 ppf</i>
					<i>cont mixed spit down with line, pump</i>
					<i>Release Plug</i>
				<i>6</i>	<i>ST DRIP w/ wch H<sup>2</sup></i>
					<i>LIFT PSI</i>
	<i>800</i>			<i>3.5</i>	<i>Slow Rate</i>
<i>5:15</i>	<i>1800</i>		<i>115</i>		<i>Plug down</i>
			<i>7</i>	<i>2</i>	<i>Plug RH w/ 30sk 5/8 super</i>
			<i>9</i>		<i>plug mat w/ 20sk</i>
					<i>SOB Complete</i>
					<i>Thank you</i>